## 2008 GRANT PROPOSAL SOLICITATION

California Hydrogen Highway Network Modular Refueling Stations

## **APPENDIX 7**

# Sample Grant Agreement and Authorization Form

California Air Resources Board 12/19/08

# Grant Agreement and Authorization Form California Hydrogen Highway Network Modular Refueling Stations Fiscal Year 2008-09

Project Title:			Tax ID #:				
Grant Recip	pient Nam	e/Grantee:					
Authorized (	Official:		CaH2Net Award: \$				
Title:			Total Project Cost: \$				
			Time Period: xx/xx/xx - xx/xx/xx				
Phone #			Grant Number:				
(Agreement)	). The follo	•	conditions as set forth in this Grant Agreement ched and incorporated as part of this Agreement				
E	xhibit A:	Grant Agreement Provi	sions				
E	xhibit B:	Work Statement incorp	orating the following attachments:				
The undersi	gned partie	Construction Schedule, Project Schedule (Attack Key Project Personnel Grant Disbursement Re Grantee's Proposal Par Progress Report Form  CAH2Net Solicitation es agree to comply with the es certify under the penalt	Sheet (Attachment A)				
California A			Grant Recipient:				
			•				
Signature of	f Authorize	d Official	Signature of Authorized Official				
Name: Mario		s tive Services Division	Name:Title:				
Date:			Date:				

#### **EXHIBIT A**

#### California Hydrogen Highway Network Modular Refueling Stations

Air Resources Board Mobile Source Control Division

#### **GRANT AGREEMENT PROVISIONS**

#### 1. GRANT PARTIES AND CONTACT INFORMATION

- 1.1 This grant is from the California Air Resources Board (herein after referred to as ARB) to (insert company name here).
- 1.2 The ARB Grant A correspondence regarding this Agreement shall be directed to:

Laura Brunkhorst
Air Resources Board
Accounting and Grants
P.O. Box 1436
Sacramento, California 95812
Phone: (916) 322-8200

Email: lbrunkho@arb.ca.gov

1.3 The ARB Grant Manager is Michael J. Kashuba and Grant Coordinator is Kathy Leuterio. All technical questions and/or correspondence regarding this Agreement shall be directed to Michael J. Kashuba. Invoices/Disbursement Requests and Progress Reports should be e-mailed to Michael J. Kashuba and Kathy Leuterio. Hard copies should be mailed to Michael J. Kashuba.

Michael J. Kashuba, Grant Manager Air Resources Board

Mobile Source Control Division P.O. Box 2815

Sacramento, California 95812 Phone: (916) 323-5123

E-mail: mkashuba@arb.ca.gov

Kathy Leuterio, Grant Coordinator

Air Resources Board

Mobile Source Control Division

P.O. Box 2815

Sacramento, California 95812

Phone: (916) 323-2966 E-mail: kleuteri@arb.ca.gov

L maii. <u>inkasnaba@arb.ca.go</u>

#### 2. TIME PERIOD

2.1 Performance of work or other expenses billable to ARB under this Agreement will commence after the Agreement is fully executed by ARB. The Agreement period shall end no later than June 30, 2011, or four (4) years after Agreement was signed.

#### 3. SCOPE OF WORK

3.1 Grantor agrees to design, build, operate and maintain a new hydrogen refueling station or combined fuel cell energy/fueling station ("stations"). The new station will meet the following environmental requirements, capacities and specifications. The new station should begin operation on or about June 30, 2010, and remain operational for at least three (3) years after commissioning. Grantor is to provide reports during the entire three (3) years of operation. ARB will provide funding for the design, construction, and operation of the hydrogen station. ARB will have no fee title interest to the hydrogen station once the station is in full operation.

#### **Environmental Requirements**

3.2

- A. 30 percent Reduction of Greenhouse Gas emissions relative to gasoline
- B. No Increase in Toxic Pollutant emissions
- C. 50 percent decrease in criteria pollutants (ROG + NOx)
- D. 0-10 percent renewables requirement

#### **Minimum Capacities and Specifications**

3.3

- E. Dispensing capacity of no less than 40 kg/day, seven days a week
- F. Able to perform an initial 5 kg 70 MPa fill in 10 minutes or less
- G. Able to perform three consecutive 5 kg, 70 MPa fills in 45 minutes
- H. Able to perform 3 consecutive 5 kg, 35 MPa fills in 25 minutes
- I. Design to provide real-time reporting of station status and remote monitoring of station alerts
- J. Filling communications hardware as per SAE-2799
- K. Dispense fuel cell grade hydrogen per SAE J-2719 or equivalent at nozzle
- L. Nozzle geometry compliant with SAE J2799 for 70 MPa and SAE 2600 for 35 MPa
- M. Provide calculations for Hydrogen fuel production cost and the sales price to the consumer
- N. J-2601 defining fueling strategies for compressed hydrogen vehicle fueling communication devices
- O. Fueling Specification for 70MPa Compressed Hydrogen Vehicles Revision Version (A) with the 3 minute 5 kg fill is the target Appendix 6.
- P. Include plan for dispenser type approval through CDFA/DMS.

#### **Siting/Operational Requirements**

3.4

- Q. Station site must be able to show title or legal access to land or real property with documentation (grant deed, deed) to be provided to ARB at time of award.
- R. Station Location located in three existing clusters: San Francisco Bay Area, Sacramento Area, and Los Angeles Area, not less than five miles from nearest public station, unless demand is justified.

- S. Convenient ingress/egress, well lit retail appearance.
- T. Station operation from 6:00 A.M to 10:00 P.M, seven days per week.
- U. Attendant available with prior notice.
- V. Universal PIN access or similar customer ID process.
- W. No personal protection equipment required.
- X. Provide necessary access to CDFA/DMS personnel for certification tests.
- Y. Station meets all codes, standards and regulations that govern Hydrogenfueling stations (NFPA 52 and others).
- Z. Community Involvement plan provided.
  - AA. Provides for public access to all OEM vehicles and approved conversions.
  - BB. Vehicles which will use station identified to ensure thruput.
  - CC. Meets or will meet all performance and safety standards set by Authorities Having Jurisdiction (AHJ).

3.5

Other Deliverables – Grantee must communicate with the Grant manager on a regular basis to discuss the progress of the stations' construction. To ensure this takes place in a regular manner, Grantee shall also provide the following deliverables in addition to the above-cited stations:

- Immediate submittal of incident reports. Preferably use reports as developed by the California Fuel Cell Partnership incident reports, as contained in Appendix 1.
- Monthly status reports will be scheduled and conducted via teleconference line with staff and management of the Sustainable Transportation Technology Branch.
- Quarterly infrastructure station reports will be required, once the station is operational. The format must follow those specified in the "National Renewable Energy Laboratories (NREL) Infrastructure Quarterly Individual Site Template Revision: F.," unless an alternative format is approved in writing by the Grant manager. Reports to be submitted, include the following: Individual Site Summary; Site Managers Log; On-Site Hydrogen Production Cost Log; Maintenance Log; Safety Log; Hydrogen Purity Log; Refueling Data, On-site Hydrogen Production Efficiency Summary, Reformer Log, Electrolyzer Log, Compression Log, Storage and Dispensing Log. In addition to these reports, Grantee shall provide for hydrogen energy stations, a C-production Log. Examples of these spreadsheets are contained in Appendix 2.
- Quarterly written progress reports that summarize project status; achievement of milestones; preliminary findings; deviations from plan; new recommendations, if any; and financial summary and Grant Disbursement Requests/invoices due to ARB.
- Quarterly progress meetings between key station and ARB personnel, held onsite if deemed necessary by ARB. Grantee shall submit written notes or a summary of such meetings.

- Final report must describe the highlights and challenges of what was involved in successfully establishing the station. The report must contain a detailed description of each of the main stages involved from planning through completion and operation of the station. The report must include a list of recommendations that might benefit the construction of a station of similar design in the future. A draft of the final report must be submitted to ARB staff for review and comment at least sixty (60) days before the submission of the final report. Grantee's final report shall follow the format specified in Exhibit F, "Final Report Format."
- From the beginning of the project, the Grantee will forward a copy of all training, performance, specification manuals, schematics, operators, maintenance, and troubleshooting manuals to ARB staff, as soon as practical.
- Additional requirements and specifications are contained in the following appendices:

Appendix 1: Incident Tracking Form

Appendix 2: Infrastructure Quarterly Individual Site Template

Appendix 3: Renewable definitions

Appendix 4 Examples – Calculating the 33.3 percent renewable hydrogen contribution

Appendix 5: Documenting Senate Bill 1505 Emissions Criteria have been met Appendix 6: Fueling Specification for 70 MPa Compressed Hydrogen Vehicles (Version A.)

#### 4. FINANCIAL MATTERS

#### Budget

- 4.1 The maximum amount of this grant is \$xxxx. Under no circumstance will ARB reimburse the Grantee for more than this amount.
- 4.2 The budget for this project is shown in Exhibit B, Attachment A. Except as stated in 3.3, the cumulative grant disbursement for any line (cost) item for the entire project shall not exceed the corresponding figure therein under "CaH2Net Grant Agreement".
- 4.3 The total Agreement funding may be reallocated among cost items or tasks only with the prior approval of the ARB Grant Manager. The ARB will not unreasonably disapprove budget reallocations provided that they will allow the project to meet its stated goals.

#### **Invoicing and Payments**

- 4.4 For services satisfactorily rendered, and upon receipt and approval of the Grant Disbursement Requests/invoices, the State agrees to compensate the Contractor for actual expenditures incurred in accordance with the rates specified below:
- 4.5 Grant Disbursement Requests/Invoices shall include the Agreement Number and shall be submitted in triplicate no more than monthly in arrears to:

Michael J. Kashuba Air Resources Board Mobile Source Control Division MS-47F P.O. Box 2815 Sacramento, CA 95812

#### **Budget Contingency Clause**

- 4.6 It is mutually agreed that if the Budget Act of the current year and/or any subsequent years covered under this Agreement does not appropriate sufficient funds for the program, this Agreement shall be of no further force and effect. In this event, the State shall have no liability to pay any funds whatsoever to Contractor or to furnish any other considerations under this Agreement and Contractor shall not be obligated to perform any provisions of this Agreement.
- 4.7 If funding for any fiscal year is reduced or deleted by the Budget Act for purposes of this program, the State shall have the option to either cancel this Agreement with no liability occurring to the State, or offer an agreement amendment to Contractor to reflect the reduced amount.

#### **Prompt Payment Clause**

4.8 Payment will be made in accordance with, and within the time specified in, Government Code Chapter 4.5, commencing with Section 927.

#### **Grant Disbursements**

- 4.9 Requests for payment shall be made with the form "Grant Disbursement Request" (Exhibit B, Attachment E) and conform to the instructions therein. Grant payments shall be made only for reasonable costs incurred by the grantee and only when the milestones stipulated in Exhibit B, Attachment B, have been accomplished, documentation of accomplishment has been provided to ARB, and any associated deliverables have been provided to ARB. Payments shall not be made more frequently than monthly.
- 4.10 Grant payments are subject to ARB's approval of progress reports and any accompanying deliverables. (See Part 5 below.) A payment will not be made if the ARB Grant Manager deems that a milestone has not been accomplished or documented, that a deliverable meeting specifications has not been provided, that claimed expenses are not documented, not valid per the budget, or not reasonable, that the grantee has not met other terms of the grant.
- 4.11 The Chief of the Mobile Source Control Division may review the Grant Manager's approval or disapproval of a Grant Disbursement/invoice. No reimbursement will be made for expenses that, in the judgment of the Division Chief of the Mobile Source Control Division, are not reasonable or do not comply with the grant.
- 4.12 The Grantee shall mail Grant Disbursement Requests/Invoices to the Grant Manager.
- 4.13 The ARB will withhold payment equal to ten percent of each Grant Disbursement/invoice until completion of all work, submittal to ARB of the final report (including an electronic file in MS Word). It is the Grantee's responsibility to submit a grant disbursement request for the withheld ten percent with the final report.

#### **Audits**

- 4.14 The ARB reserves the right to audit at any time during the duration of this Agreement the Grantee's costs of performing the grant and to refuse payment of any reimbursable costs or expenses that in the opinion of the State's auditor are unsubstantiated or unverified. The Grantee shall cooperate with the State's auditor, including but not limited to promptly providing all information and documents requested by the auditor, such as all financial records, documents, and other information pertaining to reimbursable costs, and any matching costs and expenses.
- 4.15 The Grantee shall retain all financial records referred to above and provide them for examination and audit by the State for three years after final payment under this Agreement.

#### 5. GRANT MONITORING

#### Meetings

5.1 Initial meeting: A meeting will be held between key project personnel and ARB staff, either at ARB offices in Sacramento or at the project site (at the option of the Grant Manager), before work on the project begins. The purpose of the first meeting will be to discuss the overall plan, details of performing the tasks, the project schedule, and any issues that may need to be resolved.

Review meetings: At least one review meeting may be held in Sacramento during the project. More may be required by the grant manager. Such meetings may be conducted by phone, if deemed appropriate by the Grant Manager.

#### **Technical Monitoring**

- 5.2 Any significant changes in the scope or schedule for the project shall require the prior written approval of the ARB Grant Manager and administrator.
- 5.3 The Grantee shall notify the ARB Grant Manager and administrator, in writing, immediately if any circumstances arise (technical, economic, or otherwise), which might place completion of the project in jeopardy. The Grantee shall also make such notification if there is a change in key project personnel. (see Exhibit B, Attachment D).
- 5.4 In addition to progress reports (discussed in Section 5), the Grantee shall provide information requested by the grant manager that is needed to assess progress in completing tasks and meeting the objectives of the project.

#### 6. REPORTING REQUIREMENTS

#### **Progress Reports**

- 6.1 The Grantee shall submit written progress reports at a minimum of three-month intervals. The progress reports shall be provided in the format of Exhibit B, Attachment H.
- 6.2 Every grant disbursement request (Exhibit B, Attachment E) shall be accompanied (or preceded) by a progress report that documents the completion of a milestone specified in Ex. B, Att. B], including any special deliverables defined for that milestone.
- 6.3 If the project is behind schedule, the progress report must contain an explanation of reasons and how the Grantee plans to resume the schedule.
- 6.4 The Grantee shall e-mail the progress reports to the Grant Manager and the Grant Coordinator. Progress reports that accompany Grant Disbursement Requests/Invoices shall also be mailed (postal) to the Grant Manager.

#### **Final Report Format**

6.5 When the project is complete, the Grantee shall submit a draft final report as described in the Grant Solicitation 08-606 "Guidelines for Final CaH2Net Reports", (Exhibit B). Upon approval of the draft final report by the Grant Manager, the Grantee shall provide a written copy of the final version, plus an electronic file.

#### 7. TERMINATION AND SUSPENSION OF PAYMENTS

- 7.1 The ARB reserves the right to terminate this grant upon thirty (30) days written notice to the Grantee, if the ARB determines that the project has not progressed satisfactorily during the previous three months and the Grantee and ARB have been unable to agree on modifications. In case of early termination, the Grantee will submit a grant disbursement request and a progress report covering activities up to, and including, the termination date, following the requirements in Sections 3 and 5 of these Provisions. Upon receipt of the Grant Disbursement Request/Invoice and Final Report, a final payment will be made to the Grantee. This payment shall be for all ARB-approved, actually incurred costs that in the opinion of ARB are justified. However, the total amount paid shall not exceed the total Agreement amount.
- 7.2 The ARB reserves the right to issue an Agreement suspension order in the event that a dispute should arise. The Agreement suspension order will be in effect until the dispute has been resolved or the Agreement has been terminated. If the Grantee chooses to continue work on the project after receiving an Agreement suspension order, the Grantee will not be reimbursed for any expenditures incurred during the suspension in the event ARB terminates the Agreement. If ARB rescinds

the suspension order and does not terminate the Agreement, ARB will reimburse the Grantee for any expenses incurred during the suspension that are reimbursable in accordance with the terms of the Agreement.

#### 8. DISPUTES

8.0 If, for any reason, a dispute arises during the performance of this Agreement, and the Grantee and the ARB Grant Manager cannot reach a mutual agreement, the dispute will be referred to the ARB Division Chief for final and binding resolution. The terms and conditions of this Agreement shall be interpreted in accordance with the laws of the State of California.

#### 9. INTELLECTUAL PROPERTY

9.0 The State agrees to relinquish to the Grantee all right, title, and interest in and to each patentable product, technology, developed or produced during performance of this Agreement. Proprietary data owned by the Grantee shall remain with Grantee throughout the term of this Agreement and thereafter. The extent of ARB's access to the same and testimony available regarding the same shall be limited to that reasonably necessary to demonstrate, in a scientific manner to the satisfaction of the scientific persons, the validity of any premise, postulate or conclusion referred to or expressed in any deliverable hereunder.

#### 10. INDEMNITY CLAUSE

10.1 The Grantee agrees to indemnify, defend and save harmless the State, its officers, agents and employees from any and all claims and losses accruing or resulting to any and all contractors, subcontractors, materialmen, laborers and any other person, firm or corporation furnishing or supplying work services, materials or supplies in connection with the performance of this Agreement, and from any and all claims and losses accruing or resulting to any person, firm or corporation who may be injured or damaged by the Grantee in performance of this Agreement.

#### 11. INSURANCE

- 11.1 Grantee shall furnish to State a certificate of insurance stating that liability insurance of not less than \$1,000,000 per occurrence for bodily injury and property damage liability combined is presently in effect for Grantee.
- 11.2 Grantee agrees that the bodily injury liability insurance herein provided for shall be in effect at all times during the term of this Agreement. In the event said insurance coverage expires at any time or times during the term of this Agreement, Grantee agrees to provide, at least thirty (30) days before said expiration date, a new certificate of insurance evidencing insurance coverage as provided herein for not less than the remainder of the term of the Agreement or for a period of not less than one year. New certificates of insurance are subject to the approval of the Department of General Services, and Grantee agrees that no work or services shall

be performed prior to such approval. The State may, in addition to any other remedies it may have, terminate this Agreement on the occurrence of such event. The certificate of insurance must include the following provisions:

- 1. The insurer will not cancel the insured's coverage without thirty (30) days prior written notice to State; and
- 2. The State of California, its officers, agents, employees and servants are included as additional insured, but only insofar as the operations under this Agreement are concerned.



## EXHIBIT B, Attachment A Budget Summary/Cost Sheet

Grantee: (Company name here) Grant No.: xxx-xxxx

Project: (title of project here)	LICURO DA	NTE TOTAL
LABOR		ATE =TOTAL
Program Manager (Job Description)	@	
Project Managers (Job Descriptions)		=
Consultant Costs (Job Description)		_=
Engineering Staff (Job Description)	@	_=
Technicians (Job Description)		_=
Clerical (Job Description)	@_	_=
Overhead Rate	@_	_=
Fringe Benefits	@	=
Sub Total		\$ <u> </u>
COST FOR ITEMIZED TASKS		
Site Preparation		
Station Design	<b>A</b>	
Testing/Certification/Type Evaluation		
Renewable generation System Design		
Other		
Sub Total		\$
CAPITAL EQUIPMENT COSTS		
Dispensers		
Purifier/Chiller		
Storage/Compression		
Reformer/Electrolyzer		
Photovoltaic/Wind/Other		
Additional Equipment		
Information Kiosk/Collateral Materials		
Sub Total		\$
MAINTENANCE COSTS		
Routine Service		
Warranty Cost		
Other		
Sub Total		\$
OPERATING COSTS TOTAL		\$
REAL ESTATE COST SHARE ALLOWANCE – new stations only		Ψ
25 percent of land value up to \$100,000 maximum (ap	praisal required)	\$
OTHER DIRECT COSTS	praidai roquirda)	Ψ
Travel		
Operations/Maintenance/Insurance & Indemnification		
Fuel Trucking/Transportation		
Other		
Permits		
Sub Total		<b>d</b>
		Φ
<u>FUNDING SOURCES</u>		
		<u>•</u>
GRAND TOTAL COSTS		Φ
		Ф <u></u>
ARB Match Funds Requested (Max 70 percent of Grand Total)		<b>\$</b>
Signature of Proposer:		

## **Budget by Task**

	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Project
Direct – CaH2NET-funded	0	0	0	0			0
Direct non- CaH2NET - funded	0	0	0	0			0
Indirect CaH2NET - funded	0	0	0	0	0	0	0
Indirect non- CaH2NET - funded	0	0	0	0			0
TOTAL	0	0	0	0			0

## EXHIBIT B, Attachment B

## **Construction Schedule/Project Milestones**

Grantee: (company name here) Grant No.: xxx-xxxx

Project Title: (title of project here)

Milesto	ne Task	Deliverable (in add	ition to quarterly progress reports)	Duration
1	1			x months
2	2			x months
3	3			x months
4	4	Final report		date

## EXHIBIT B, Attachment C

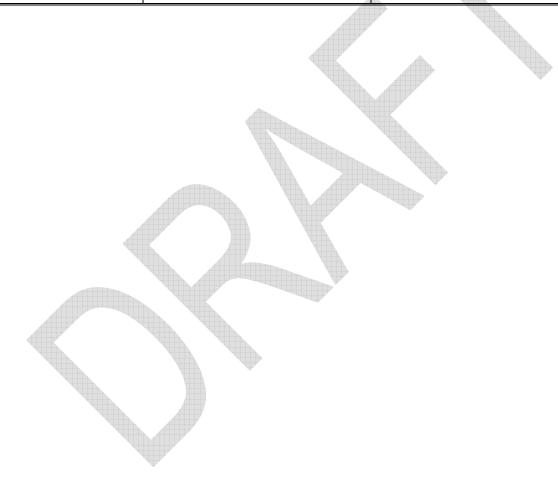
## **Grantee's Project Schedule (Tasks)**

Task #	Task Content	Scheduled Completion Date (weeks after project start)
1		Х
2		х
3		x
4	Final Report	X
		X

## EXHIBIT B, Attachment D

## **Key Project Personnel**

Name	Position	Duties



## EXHIBIT B, Attachment E

Grant No.:

## **Grant Disbursement Request and Expenditures Summary**

Project Title:						
Period covered: Task # (or "summary"):						
Please submit a <u>separate</u> form for <u>each major project task</u> (defined in Exhibit B, Attachment C) that had expenses during the period, plus a <u>summary form</u> for total expenses in the period.						
All expenses to be paid by CaH2NET funds are allowed per Exhibit B, Atta charges, showing the numbers of he staff or in-kind partner's staff (regard Requests/Invoices from subcontract supporters.	achment A (Budge ours spent by each dless of the fundin	et Summary). An professional g source). Pro	Attach an itemiz member of the ovide Grant Dis	zation of labor Grantee's bursement		
Direct Costs	Expenses Charged to CaH2Net	Grantee's Expenses	Others' Expenses *	Total		
1. Labor						
2. Benefits						
3. Subcontractors and Consultants						
4 Equipment						
5. Travel and Subsistence						
6. Materials & Supplies						
7. Other Direct						
Subtotal, Direct Costs:						
Indirect Costs						
8. Overhead						
9. Other indirect						
Subtotal, Indirect Costs:						
Total						
* in-kind contributions and expenses  I certify that, to the best of my knowl report, including the accounting of excomplete and is in accordance with Resources Board to make any inqui	edge and belief, the xpenditures on the puther the Agreement. In a	information cor project as summaddition, I hereb	narized above, is y authorize the 0	correct and		
Grantee's Signature		Date		_		

#### EXHIBIT B, Attachment F

#### 2008 GRANT PROPOSAL SOLICITATION California Hydrogen Highway Network Modular Refueling Stations

## **Grantee's Proposal Package**

California Air Resources Board 12/19/08

## EXHIBIT B, Attachment G

# Progress Report Form (date)

Grant No.: Title:	
Organization:	
Report period:	
List (by number) of all tasks that are complete:	
Scope of Work planned for this report period (copied from preceding repo	nrt):
Work accomplished in this period (organized by task). For completed tas goals:	ks, compare results to
For any planned work or scheduled milestone that did not occur:	
Reasons for non-occurrence:	
Will the problem persist?:	
Can the work be accomplished in the next work period?	
Will the nature of milestones or the overall project schedule be affected schedule, if needed.):	? (Propose a new
Please summarize any changes made during the period in the work plan,	budget, or schedule:
Please describe any other current or foreseeable problems and their poss	sible mitigation:
Work planned for the next reporting period (by task):	

#### Please update these tables:

#### **Project Definition**

#### Milestones

Task <sup>1</sup>	Description
1	
2	
3	
4	
(add rows)	

ltem	Due Date

## Progress vs. Plan

		Planned <sup>1</sup>	Current Status				
Task <sup>1</sup>	Completion date	CaH2Net labor budget (\$)	Total CaH2Net budget (\$)	(3)	On schedule?	Labor billed to CaH2Net <sup>2</sup> (\$)	CaH2Net invoices <sup>2</sup> (total \$)
1							
2							
3							
(add rows)							

<sup>&</sup>lt;sup>1</sup> as defined in the Agreement

2. Please add a narrative as needed to present accomplishments and findings of note.

<sup>&</sup>lt;sup>2</sup> cumulative; since inception of Agreement

<sup>&</sup>lt;sup>3</sup> Enter one: "not started", "in progress", or "completed"

#### **EXHIBIT C**

## 2008 GRANT PROPOSAL SOLICITATION

California Hydrogen Highway Network Modular Refueling Stations

California Air Resources Board xx/xx/xx